

Progress In Implementing Electronic Collection And Distribution Of WSR-88D Level II Data

Presented By:

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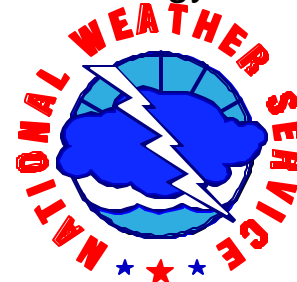
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AMS 31st International Conference On Radar Meteorology



Background

- At 2003 AMS Annual Meeting NWS Announced Plans To Electronically Collect And Distribute Level II Data
 - NWS Would Use Data To Meet Archive And Operational Requirements
 - NWS Would Leverage The CRAFT Program To Build The NWS Network
 - NWS Would Consider External Suggestions On The NWS Architecture Before Finalized

Recent Developments

- NWS Developed Initial Network Architecture
- NWS Held A Public Meeting On 18 June 2003
 - Described the proposed architecture
 - Described the proposed implementation schedule
 - Current and prospective non-NEXRAD agency users of real-time Level II data commented on the proposed architecture
 - Solicited comments on how the private sector may wish to receive Level II data, given the proposed architecture
 - Discussed how the information gathered from the meeting will be used in finalizing the distribution architecture and policy
 - Answered questions that arose during the meeting

Recent Developments

(Continued)

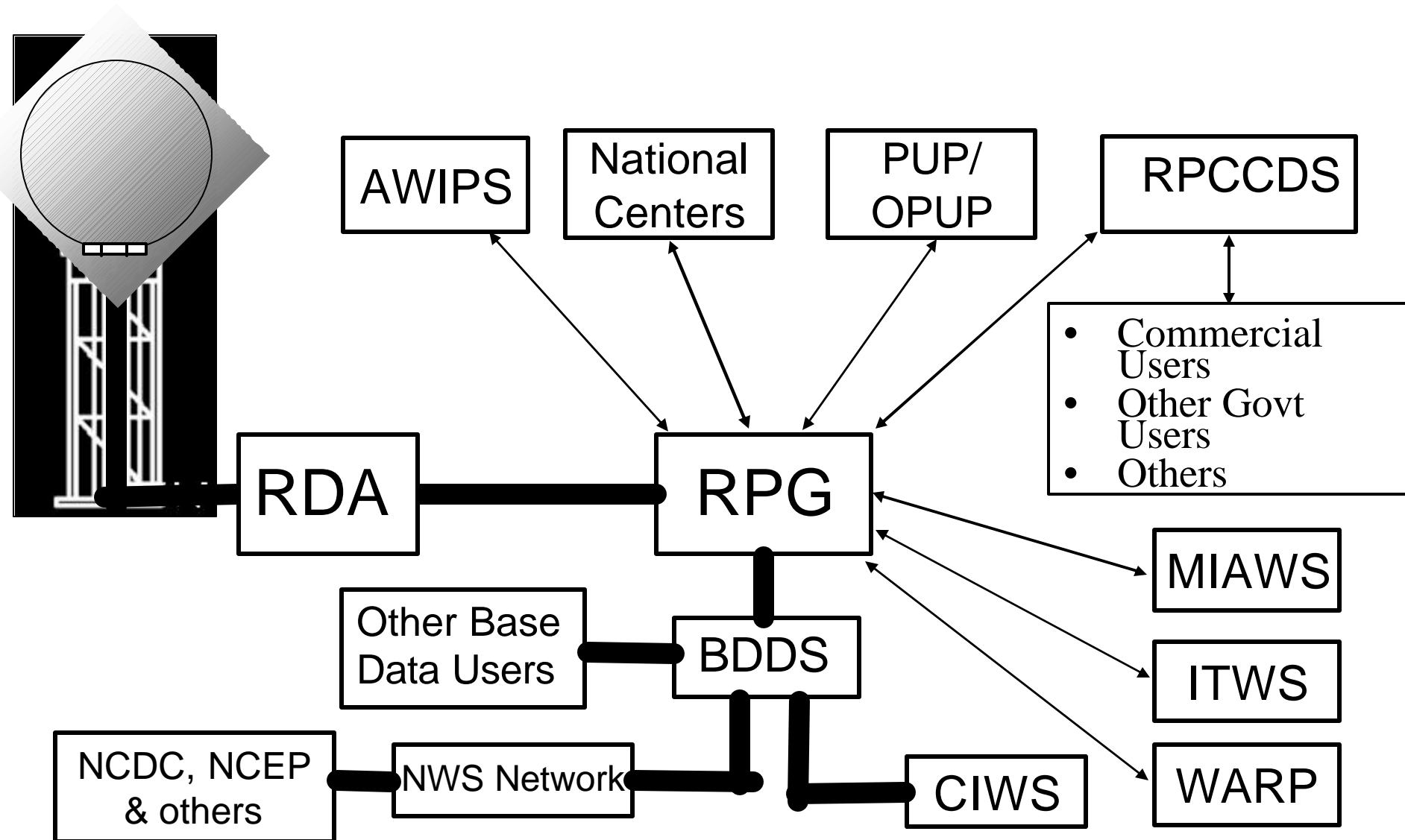
- June 18 Meeting Highlights
 - 30 Private Sector And University/R&D Staff Attended, Plus Many NWS Staff
 - NWS Announced NO Restrictions On Use Or Redistribution Of Data
 - Unidata Will Establish Top-Tier LDM Node(s) To Facilitate University/R&D Redistribution
 - Private Sector Requested NWS Provide Connection Options
 - Primary Meeting Summary Posted At:
http://www.roc.noaa.gov/NWS_Level_2/ResultsFrom061803Mtg/061803Mtg_Summary.pdf
 - NWS Announced Q&A Period
 - Results Posted
At:http://www.roc.noaa.gov/NWS_Level_2/ResultsFrom061803Mtg/

Nexrad Level II Central Collection/Distribution via NWSNet/Internet 2

ID	Task Name	Qtr 1, 2003			Qtr 2, 2003			Qtr 3, 2003			Qtr 4, 2003			Qtr 1, 2004			Qtr 2, 2004			Qtr 3, 2004			Qtr 4,
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	CRAFT POC																						
2	Implement NWSNet & I2 access																						
3	IOC Phase 1A																						
4	IOC Phase 1B																						
5	IOC Phase 2																						
6	FOC																						

	<u>POC</u> CRAFT Proof Of Concept	<u>IOC Phase 1A</u> Keep OU/CAPS CRAFT sites, Use NWSNet/I2 with RHQ LDMs	<u>IOC Phase 1B</u> Verify NWSNet/ I2 while adding NWS sites, min cost expansion	<u>IOC Phase 2</u> Verify RHQs routing & MD GigaPoP Distribution	<u>FOC Phase 3</u> Expand to metadata, add DoD sites, remove extra equipment
# Radar Sites electronically sending data	62 CRAFT Sites	62 CRAFT Sites	62 CRAFT Sites + 61 NWS Sites	62 CRAFT Sites + 61 NWS Sites	All CONUS ~ 132 sites with 9 new DoD sites
# Radar Sites On NWSNet/I2	0, some ER CRAFT sites using NWSNet	11 CRAFT sites move to NWSNet/I2	11 CRAFT + 61 NWS LDM sites on NWSNet/I2	11 CRAFT + 61 NWS LDM sites on NWSNet/I2	All CONUS ~ 132 sites with 9 new DoD sites
Distribution Points to NCDC/NCEP	OU distribution to NCDC	OU distribution to NCDC	OU distribution to NCDC	UM, OU, distribution to NCDC	UM distribution to NCDC and NCEP
Data Type	Base Data	Base Data	Base Data	Base Data	Level II data (base data & metadata)
Compression & LDM	LDM PC	LDM PC	LDM PC	LDM PC	ORPG BDDS integrated
ORPG BDDS Access	External & Agency	External & Agency Firewalled NWSNet	External & Agency Firewalled NWSNet	External & Agency Firewalled NWSNet	Trusted Agency & NWSNet

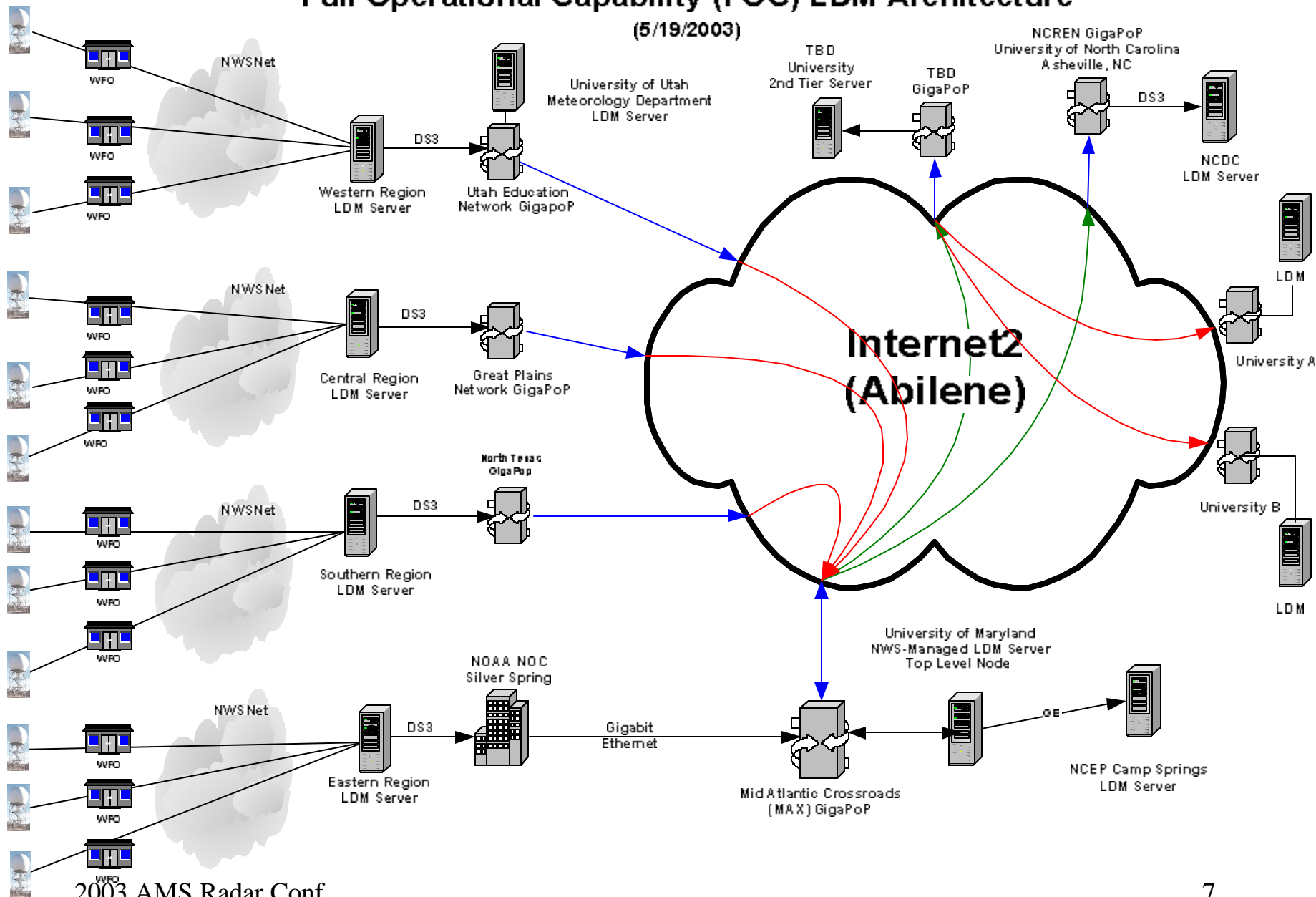
WSR-88D Data Flow (Today)



Level II Radar Distribution

Full Operational Capability (FOC) LDM Architecture

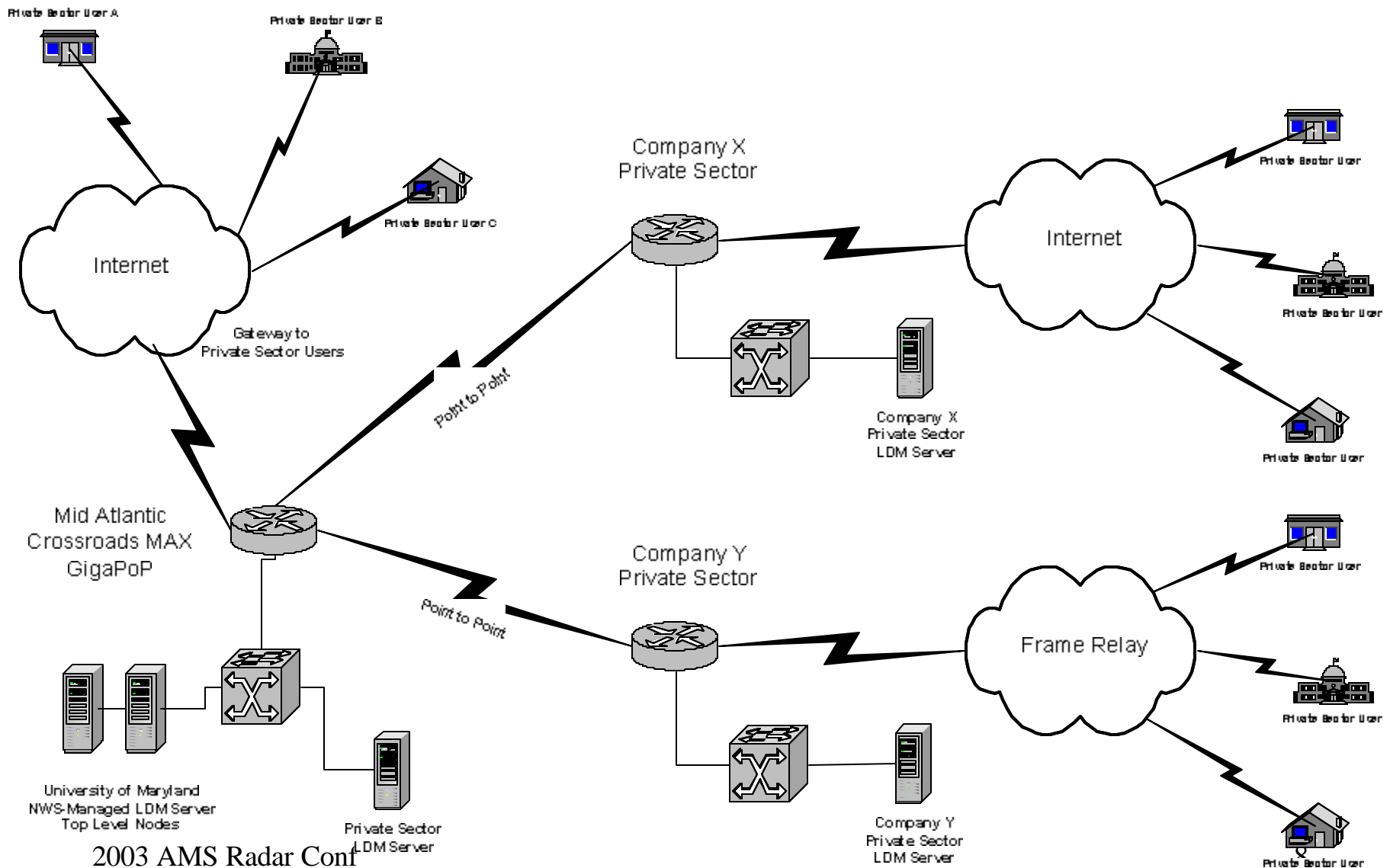
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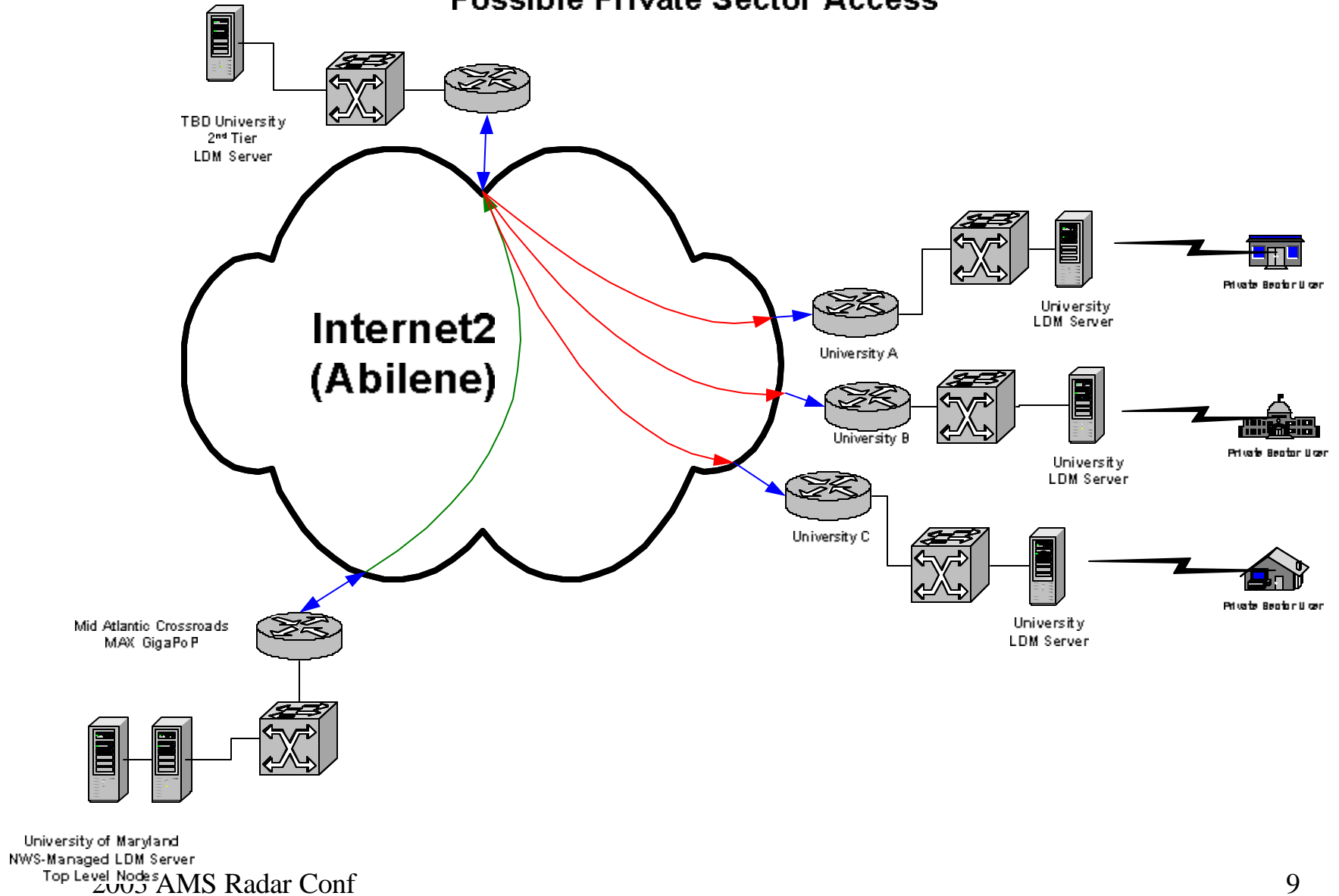
Level II Radar Distribution

Full Operational Capability (FOC) LDM Architecture

Possible Private Sector Access



Level II Radar Distribution Full Operational Capability (FOC) LDM Architecture Possible Private Sector Access



Additional Information

- Level II Data Format Will Change (Examples)
 - RPG Build 5, Spring 2004 Release, Will
 - Add Metadata Header Record (Including BDDS Time Stamp)
 - Add 2 New Volume Coverage Patterns (VCPs)
 - Future RPG Builds May Add Other VCPs
 - Introduction Of Open RDA (9/04 – 12/05) And Beyond
 - New Metadata Information
 - POSSIBLE Changes To Data Stream (e.g., 250 m Reflectivity Data, 0.5 Degree Sampling, Dual Polarization) – NOT TO BE ASSUMED ANY/ALL WILL BE ADDED

Additional Information

(Continued)

- Architecture Will Support Different Approaches To Distributing Data
 - Expect Changes Based On Experiences, For Example
 - Redundant Data Streams From Regional HQ Servers
 - Multiple Paths For Data To Reach Private Sector Users
- Check The Following URL For Further Updates:

http://www.roc.noaa.gov/NWS_Level_2